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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,104	10/16/2003	Anand A. Kekre	VRT0101US	7226

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CSA LLP  
4807 SPICEWOOD SPRINGS RD.  
BLDG. 4, SUITE 201  
AUSTIN, TX 78759

EXAMINER

LEWIS, CHERYL RENE A

ART UNIT PAPER NUMBER

2167

DATE MAILED: 05/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/687,104	KEKRE ET AL.	
	Examiner	Art Unit	
	Cheryl Lewis	2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 October 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-15, 17-19 and 21-24 is/are rejected.
- 7) ☒ Claim(s) 4, 5, 16 and 20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>2/2/04</u>  | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

1. Claims 1-24 are presented for examination.

### *Claim Rejections - 35 USC § 101*

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 1, 11, 21, and 24 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

#### **MPEP 2106 IV.B.2.(b)**

A claim that requires one or more acts to be performed defines a process. However, not all processes are statutory under 35 U.S.C. 101. Schrader, 22 F.3d at 296, 30 USPQ2d at 1460. To be statutory, a claimed computer-related process must either: (A) result in a physical transformation outside the computer for which a practical application in the technological arts is either disclosed in the specification or would have been known to a skilled artisan, or (B) be limited to a practical application within the technological arts.

4. Claims 1, 11, 21, and 24 are not statutory because they merely recite a number of computing steps without producing any tangible result and/or being limited to a practical application within the technological arts. **The use of a computer has not been indicated.**

These claims do not indicate the use of hardware on which the software runs to perform the steps recited in the body of the claim. Software or program can be stored on a medium and/or executed by a computer. In other words the software must be computer-readable executed on a computer. The use of a computer is not evident in

the claims. MPEP 2106.IV.B1(a) refers to "computer-readable" medium with computer program encoded on it."

***Allowable Subject Matter***

5. Claims 4, 5, 16, and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-3, 6-15, 17-19, and 21-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Mandal et al. (Pat. No. 6,772,178 B2 filed Jul 27, 2001, hereinafter Mandal).

8. Regarding Claims 1, 11, 21, and 24, Mandal teaches method and apparatus for managing remote data replication in a distributed computer system.

The method and associated system for managing remote data replication in a distributed computer system as taught or suggested by Mandal includes:

replicating a first change made to a primary volume (col. 4, lines 60-67, col. 8, lines 66-67, col. 9, lines 1-4), wherein the first change is replicated to a secondary volume; and replicating a second change made to the primary volume (col. 4, lines 60-67, col. 5, lines 25-67, col. 8, lines 66-67, col. 9, lines 1-4), wherein the second change is replicated to the secondary volume, the second change is caused by a restore operation (col. 4, lines 60-67, col. 5, lines 25-67, col. 8, lines 66-67; col. 9, lines 1-4), and the replicating the second change comprises recording an order of the second change relative to the first change (col. 4, lines 60-67, col. 5, lines 25-67, col. 8, lines 66-67; col. 9, lines 1-4).

9. Regarding Claim 2, 12, and 22, Mandal teaches replicating the first change comprises performing periodic replication (col. 4, lines 60-67, col. 5, lines 25-67, col. 8, lines 66-67, col. 9, lines 1-4); replicating the second change comprises updating a volume map to indicate that a region of the secondary volume to a region of the primary volume changed by the restore operation with the primary volume during a next period of performing periodic replication (col. 4, lines 60-67, col. 5, lines 25-67, col. 8, lines 66-67, col. 9, lines 1-4).

10. Regarding Claim 3, 13, and 23, Mandal teaches replicating the first change comprises performing asynchronous replication (col. 4, lines 60-67, col. 5, lines 25-67, col. 8, lines 66-67, col. 9, lines 1-4), replicating the second change comprises allocating an entry corresponding to the restore operation in a log of changes to the primary volume and entry includes information indicating the order of the second change relative

Art Unit: 2167

to the order of the first change (col. 4, lines 60-67, col. 5, lines 25-67, col. 8, lines 66-67, col. 9, lines 1-4).

11. Regarding Claims 6-10, 14, 15, and 17-19, the limitations of these claims have been noted in the rejections of claims 1-3 above. They are therefore rejected as set forth above.

***NAME OF CONTACT***

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cheryl Lewis whose telephone number is (571) 272-4113. The examiner can normally be reached on 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cottingham can be reached on (571) 272-7079. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

(571) 273-4113 (Use this FAX #, only after approval by Examiner, for "INFORMAL" or "DRAFT" communication. Examiners may request that a formal paper/amendment be faxed directly to them on occasions.).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/ Technology Center (571) 272-2100.

Art Unit: 2167

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Cheryl Lewis". The signature is fluid and cursive, with the first name "Cheryl" being more prominent than the last name "Lewis".

Cheryl Lewis  
Patent Examiner  
April 28, 2006